

IN THE CLAIMS

1. (Previously Presented) A data storage device comprising:
a storage medium;
nanometer-scaled data storage areas in the storage medium;
an energy-emitting tip positioned in close proximity to the storage medium;
a fluid medium positioned between the energy-emitting tip and the storage medium
wherein the fluid medium comprises a ferrofluid; and
particles contained in the fluid medium.
2. (Original) The data storage device of claim 1, wherein the energy-emitting tip emits electrons.
3. (Original) The data storage device of claim 1, wherein the energy-emitting tip emits thermal energy.
4. (Cancelled)
5. (Original) The data storage device of claim 1, wherein the fluid medium comprises a high-dielectric fluid.
6. (Original) The data storage device of claim 1, wherein the particles comprise a material chosen from the group consisting of electrically conducting, dielectric and paraelectric materials.
7. (Original) The data storage device of claim 1, wherein the particles comprise a magnetic material.
8. (Original) The data storage device of claim 1, wherein the particles form a bridge between the tip and the storage medium.
9. (Previously Presented) A data storage device comprising:
a storage medium;
nanometer-scaled data storage areas in the storage medium;
an energy-emitting tip positioned in close proximity to the storage medium; and
molecules positioned between the energy-emitting tip and the storage medium wherein
the molecules are at least partially immersed in a fluid medium.

10. (Original) The data storage device of claim 9, wherein the energy-emitting tip emits electrons.

11. (Original) The data storage device of claim 9, wherein the energy-emitting tip thermal energy.

12. (Previously Presented) The data storage device of claim 9, wherein each of the molecules comprises a one-dimensional conductor molecule.

13. (Previously Presented) The data storage device of claim 12, wherein the one-dimensional conductor molecule comprises at least one type of molecule chosen from the group consisting of diols, polymers, surfactants, nanotubes and polymers.

14. (Previously Presented) The data storage device of claim 9, wherein the molecules comprise conductive molecules attached to the storage medium.

15. (Previously Presented) A method of data storage comprising:
providing a storage medium comprising nanometer-scaled data storage area;
positioning an energy-emitting tip in close proximity to the storage medium;
guiding energy emitted from the energy-emitting tip to the storage area wherein the guiding step comprises channeling the energy emitted through particle in a fluid medium between the storage medium and the energy-emitting tip wherein the fluid medium comprises a ferrofluid;
altering a state of the storage areas with the emitted, guided energy.

16. (Original) The method of claim 15, wherein the guiding step comprises channeling the energy emitted through conductor molecules positioned between the storage medium and energy-emitting tip.

17. (Previously Presented) The method of claim 16, wherein the guiding step comprises using conductor molecules wherein each of the conductor molecules comprises one-dimensional conductor molecules.

18. (Cancelled)

19. (Previously Presented) The method of claim 15, wherein the guiding step comprises using particles that form a bridge between the storage medium and the energy emitting tip.

20. (Cancelled)

21. (New) A data storage device comprising:
a storage medium;
nanometer-scaled data storage areas in the storage medium;
an energy-emitting tip positioned in close proximity to the storage medium;
a fluid medium positioned between the energy-emitting tip and the storage medium;
and
particles contained in the fluid medium, wherein the particles comprise a magnetic material.

22 (New) A method of data storage comprising:
providing a storage medium comprising nanometer-scaled data storage area;
positioning an energy-emitting tip in close proximity to the storage medium;
guiding energy emitted from the energy-emitting tip to the storage area, wherein
guiding comprises channeling the energy emitted through particles in a fluid
medium between the storage medium and the energy-emitting tip, and wherein
the fluid medium comprises a ferrofluid, and
altering a state of the storage areas with the emitted, guided energy.
